Introduction to NIDIS, Midwest DEWS and Strategic Plan

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History of the National Integrated Drought Information System (NIDIS)

Authorized in 2006

- **Why:**
  - Recognition that better informed and more timely drought-related decisions lead to reduced impacts and costs.
  - **Goal:** ***"Enable the Nation to move from a reactive to a more proactive approach to managing drought risks and impacts"*** **PL 109-403**

Reauthorized in 2014

- Authorizes the appropriation of funds (via NOAA) through FY2018
- Develop and expand the Regional Drought Early Warning Systems

What is NIDIS?

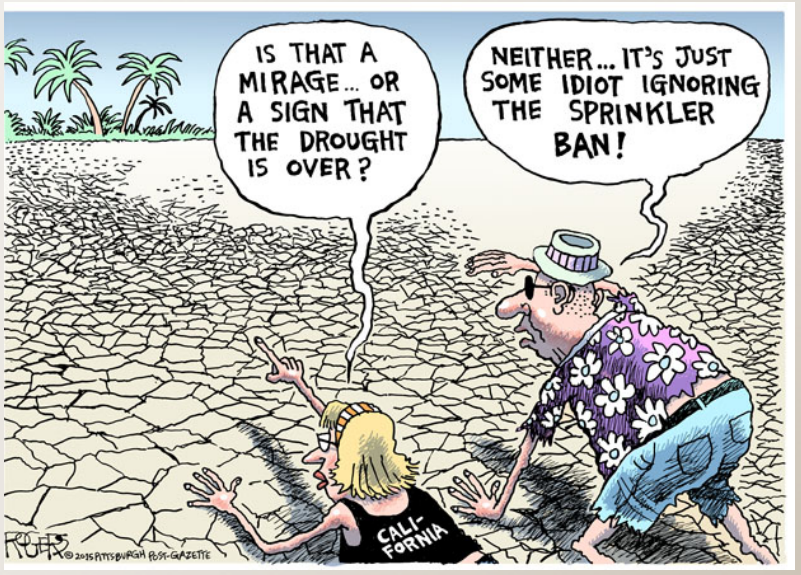
- NIDIS is congressionally authorized with specific mandates (Public Laws 109-430 and 113-86)
- Brings drought information, research, education, policy and networking together
- NOAA program that operates on an inter-agency level

NIDIS Goals

- Leadership and networking among all sectors of the economy and services to monitor, forecast, plan for and cope with the impacts of drought

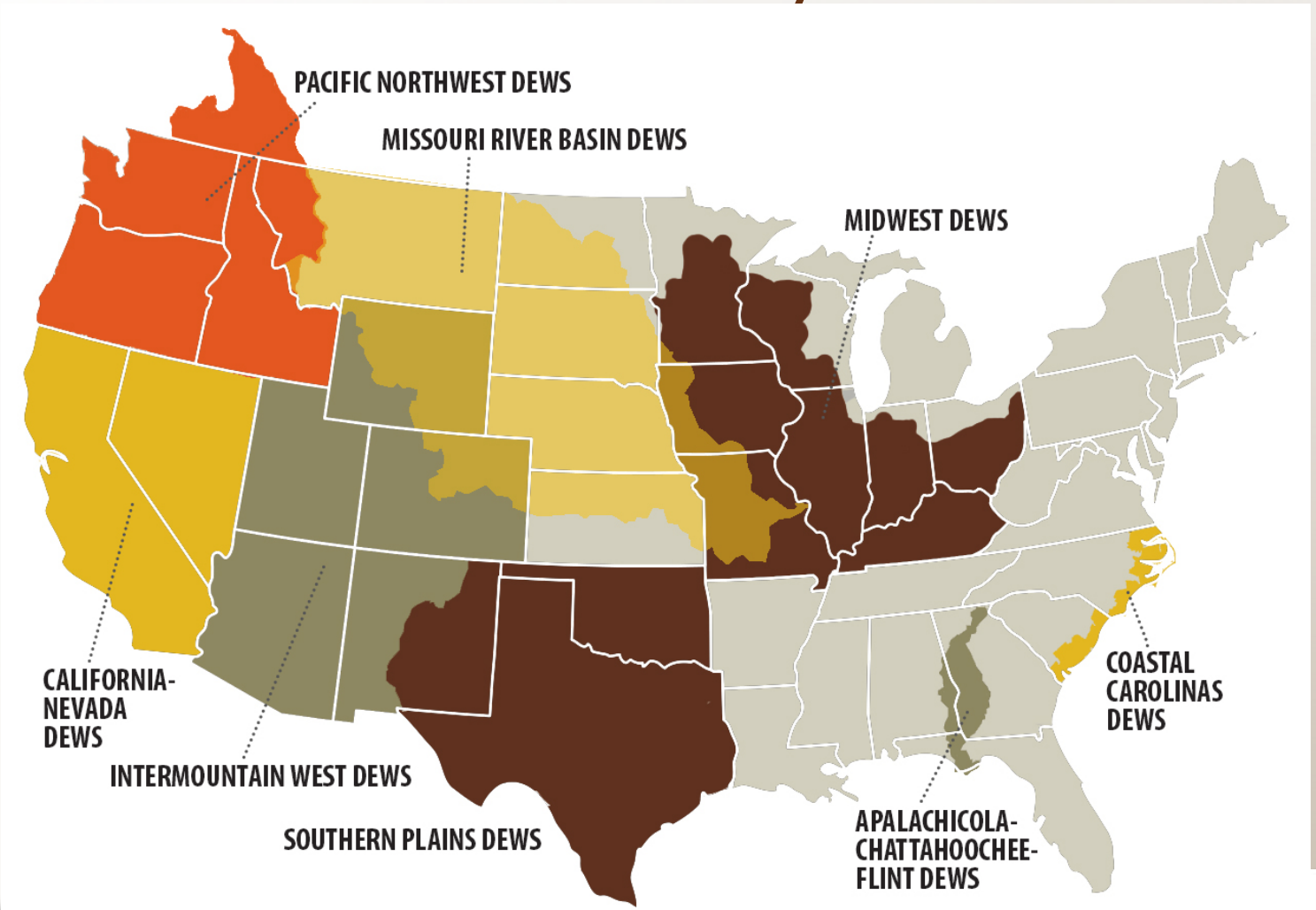
- Support drought research- including indicators, risk assessment and resilience

- Develop educational resources, interactive systems, and tools to promote sound decision making, drought awareness, and response

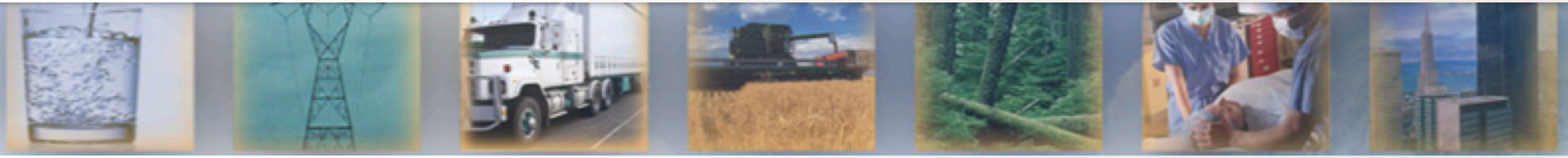


How? Development of Early Drought Warning Systems

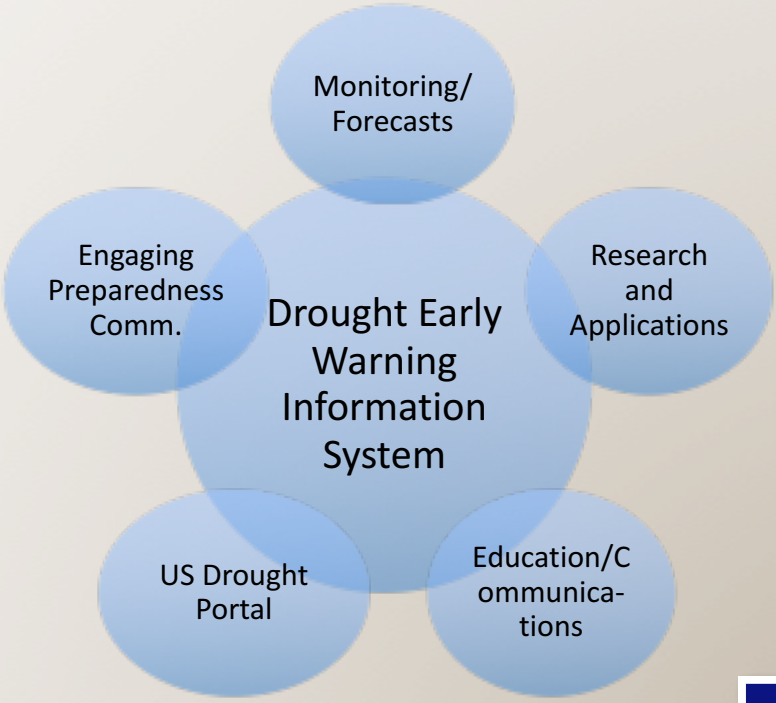
NIDIS Regional Drought Early Warning Information Systems



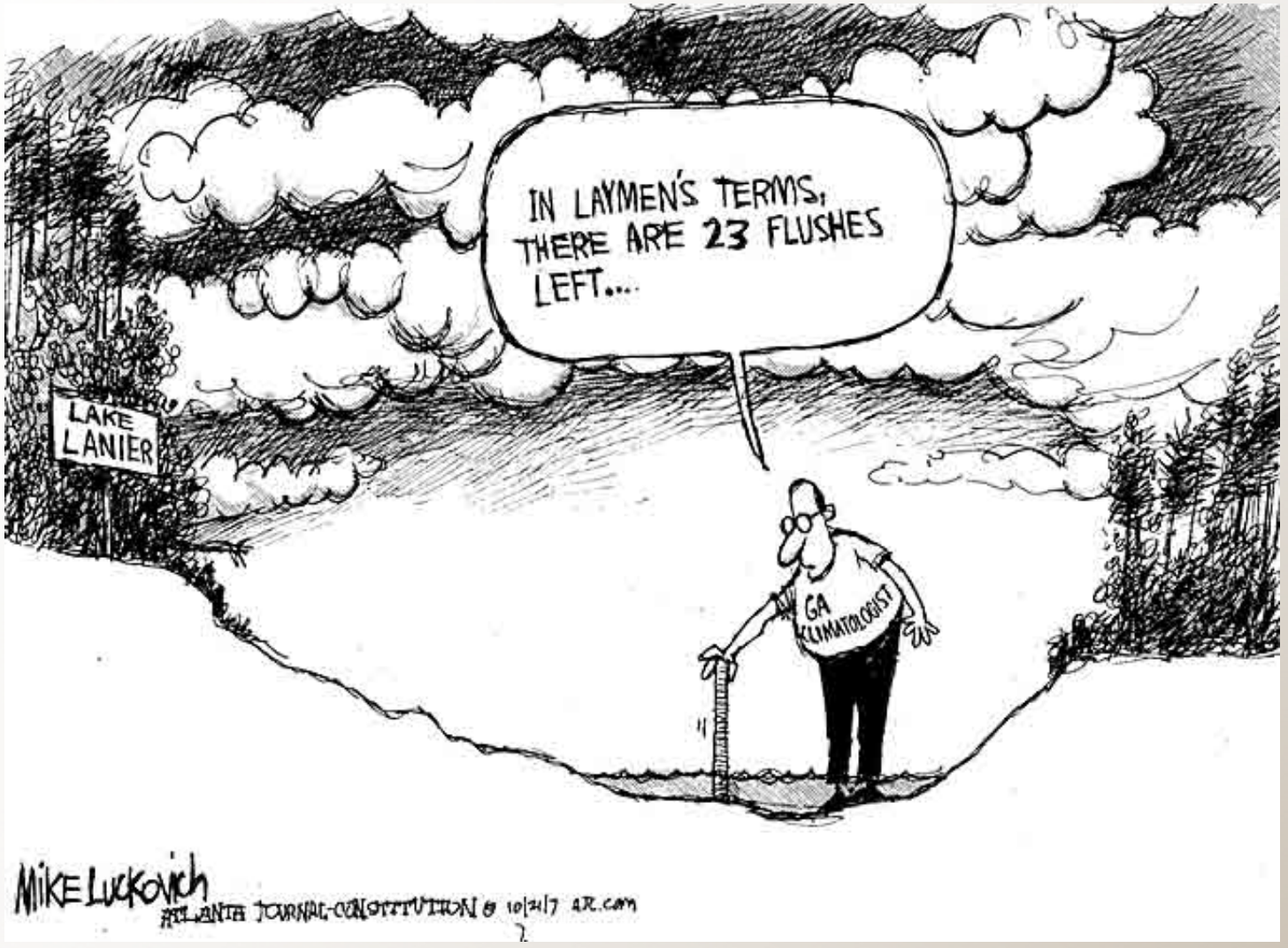
What is Drought Early Warning System?



What is a DEWS?
A DEWS utilizes new and existing partner networks to optimize the expertise of a wide range of federal, tribal, state, local and academic partners in order to make climate and drought science readily available, easily understandable and usable for decision makers; and to improve the capacity of stakeholders to better monitor, forecast, plan for and cope with the impacts of drought.



This is what we want to avoid!



Objectives of the Midwest DEWS

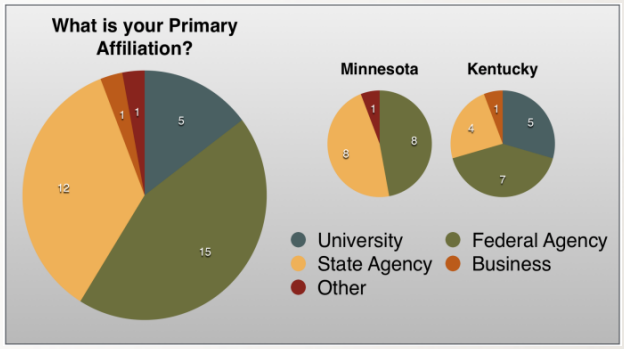
- Provide a forum for a diverse group of federal, tribal, state, and local stakeholders that represent the water and land resource management communities, to strategize and develop appropriate, relevant, useful and readily available drought, climate, weather and water-related information.

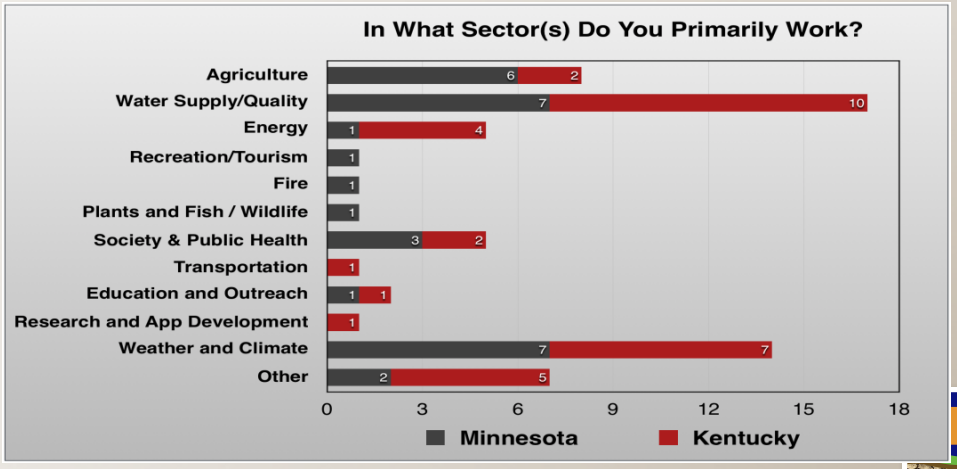
- Develop an understanding of the existing observation and monitoring networks, data, tools, research and other planning and mitigation resources available for a DEWS.

- Identify the economic sector-specific and geographic needs for future monitoring, prediction, planning and information resources.

Midwest DEWS Planning Process

- Midwest Climate and Agriculture Workshop
  - Champaign, IL – Sept 29 through Oct 1, 2015
- Midwest Climate Outlook and DEWS Planning Workshops
  - **Ohio Valley** - Louisville, KY - Nov 3, 2015
  - **Upper Mississippi Basin** - Bloomington, MN - Nov 5 and 6, 2015
- DEWS Kick-off Workshop
  - St. Louis – Feb 9 – 11, 2016





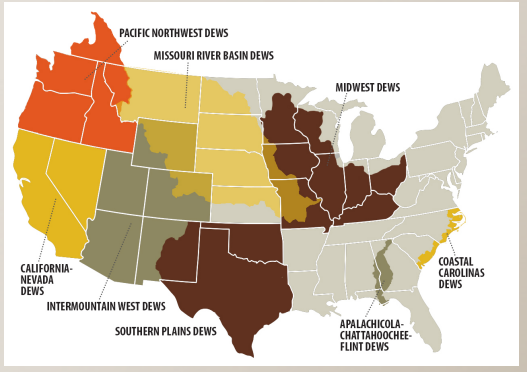
Attendees at Nov Planning Workshops

Strategic Plan

- Roadmap for moving forward with the Midwest DEWS
- Priorities (tasks) for the midwest region to improve drought early warning and resiliency
- Identify existing and new drought- related actions throughout the region
- 2-year time frame yet live document where will be updated

Benefits of a DEWS Strategic Plan

- Fostering a regional network
- Collaboration and coordination
- Reference to help generate policy and governmental support
- Resource to assist with leveraging funds
- Foster sharing of activities and info across DEWS



Strategic Plan and Leveraging Resources

1. What are the priorities? (needs)
2. What is going to be done?
3. Who is leading and others involved?
4. What are the deliverables?
5. What is the timeframe?
6. How is it going to be funded?

Task 3 – Across Basin Activities

Subtask 3.1 –Midwest/Great Plains Early Warning Webinars (monthly)
Regular coordination of federal entities and outlooks/data in the MRB

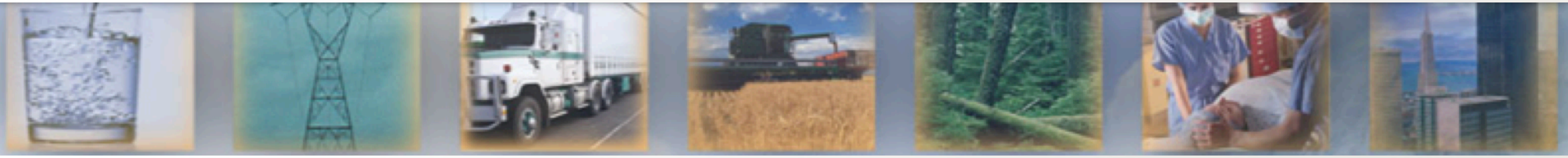
Subtask 3.2 –Regional Monitoring

Subtask 3.3 –USDA Northern Plains Climate Hub

Subtask 3.4 –US Army Corps of Engineers: Working with USACE Outlooks and Monitoring Interaction

Subtask 3.5 –Identify federal funding streams and ways to leverage them for supporting drought planning

First Years of a DEWS



Phase 1

Scoping the DEWS

- Gap analyses
  - What info exists?
  - How is it being coordinated and used?
- Identify 2-3 critical issues
- Characterize and communicate risks across timescales for these critical issues

Phase 2

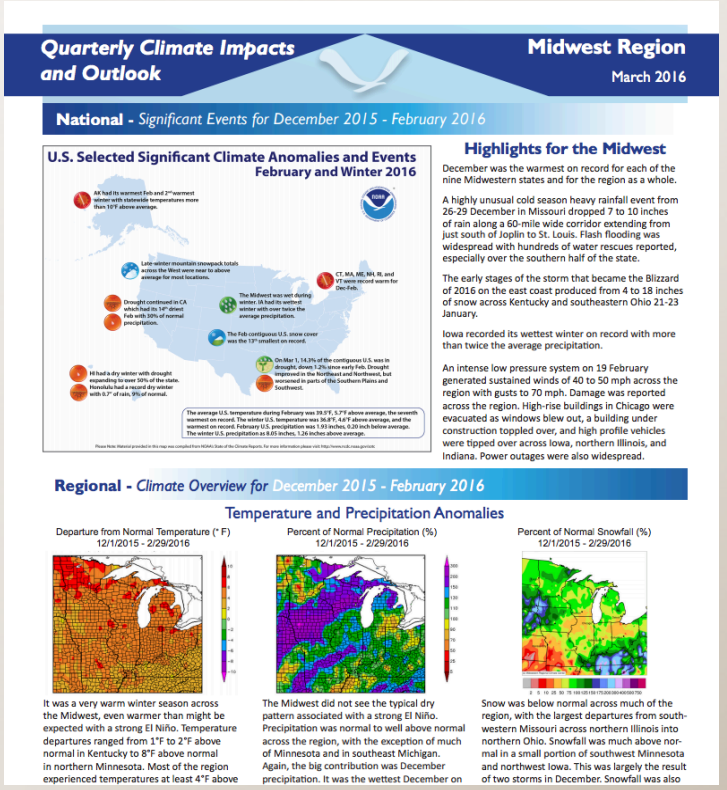
Implementation of the DEWS

- Consider seasonal, multi-year, longer term trends
- Develop drought sub-portals
- Embed information into preparedness & adaptation plans
- Establish network for ongoing briefings on impacts and projections

Task 1

Integration of Networks to Foster Collaboration and Information Sharing

- DEWS outreach and communication
- Focused outreach on as-needed basis
- Inform the drought portal
- Federal partnerships
- Regional forums and assessment workshops
- Sector outreach
- Drought simulations

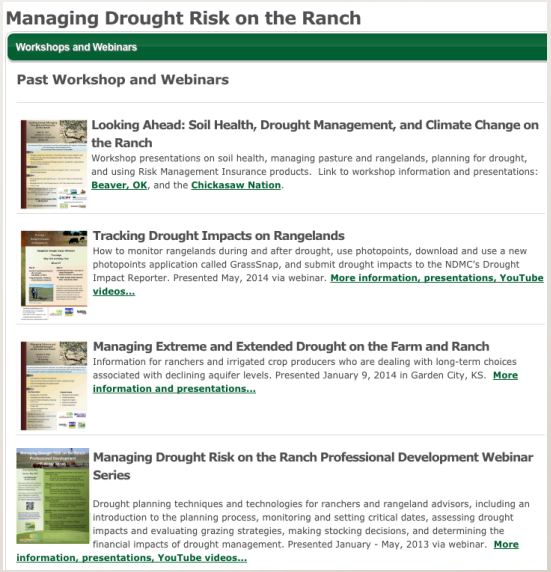


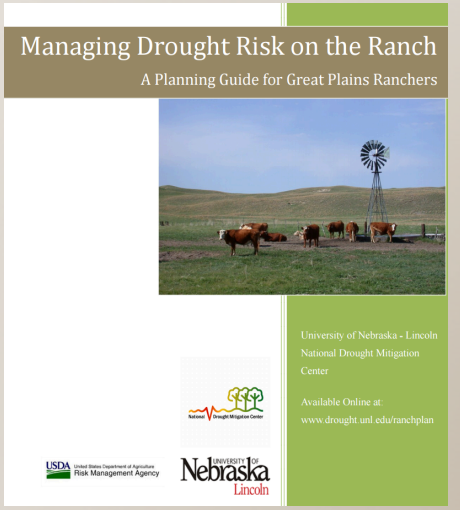
http://mrcc.isws.illinois.edu/pubs/pubsMWquarterly.jsp

Task 2

Integration of Data for Drought Planning and Vulnerability Assessments

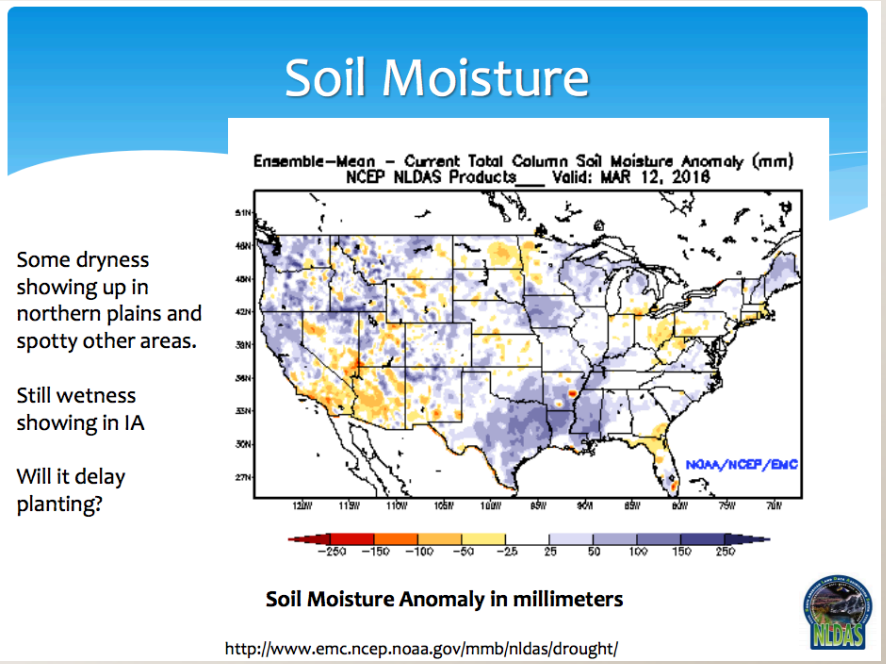
- Leveraging existing citizen science and monitoring programs
- Strategies to improve collection and reporting of drought impacts
- Strategies to improve collection and reporting of adaptive capacities
- Support drought vulnerability assessments and drought planning





Task 3
Hydrologic and Climate Processes

- Development of web service for hourly climate data
- Regional Mesonet Program



Task 4
Drought Education and Public Outreach

- Social marketing study on drought messaging to the public
- Public outreach and communications workshop

Contact Information

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Revisit Needs from the Midwest DEWS Kickoff Workshop

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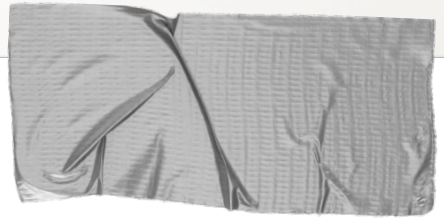
November 7 and 8, 2016

Revisit Needs from the Midwest DEWS Kickoff



Our Tasks

- **Introduction Discussion (5 – 10 min)**
  Overview
- **Discuss Drought Related Issues and Opportunities to Leverage (10 min)**
  Identify “pet” projects/activities
- **Top selections (5-10 min)**
  What can the Midwest DEWS do to support these actions?

Regional "Pet Projects"

Examples of Midwest "Pet Project" Ideas

- Leverage UMRBA Watershed Study
  - Issue: Need better understanding of how surface water and sediment move in high and low flow conditions
  - Pet project: work with UMRBA to add study of sediment transports under low-flow conditions
  - Resources/people: UMRBA, NIDIS, USACE, local participants, etc
- Increased Groundwater Irrigation during Drought
  - Issue: What are impacts on groundwater resources with increased irrigation demand during drought and how can this be managed?
  - Pet project: Study and risk assessment
    - What could the demand be and what could the system handle?
  - Resources/people: city/county water use data, state geologic surveys, USGS, DNR, USDA

Regional Drought-Related Issues

- What are some of the major drought-related issues that you would like to see addressed in this region over the next 1 to 5 years?
- What would be your “pet project/activity”

Opportunities to Leverage Resources

- Are there groups already working/interested in this? If so, who?